

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 89-158

WASTE DISCHARGE REQUIREMENTS FOR:

RICHMOND REDEVELOPMENT AGENCY  
STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION  
I-580 FREEWAY EMBANKMENT CLASS II LANDFILL  
RICHMOND, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. Richmond Redevelopment Agency and the State of California, Department of Transportation (hereinafter called the discharger) proposes to create and close a 2 acre Class II Landfill, located within the I-580 Freeway Unit 5, Phase 4 construction of a freeway embankment at the southwest corner of Standard Avenue and Castro Street in the City of Richmond.
2. The discharger submitted a Report of Waste Discharge dated 24 August 1989, including a waste characterization report, a facility design report, a water quality monitoring plan, a design and operations plan, and a closure and post-closure maintenance plan. Minor modifications to the plans may be required to comply with Subchapter 15.
3. The landfill will be constructed on land owned by the State of California, Department of Transportation. The site is located in Section 14, T1N, R5W of the Mount Diablo Baseline and Meridian.
4. Surface drainage is controlled around the site, and the incident rainfall is directed off the site into a storm drain system that discharges into central San Francisco Bay.
5. The waste is a silty clay soil that contains concentrations of total petroleum hydrocarbons as high as 1,400 milligrams per kilogram (mg/kg) and total oil and grease as high as 2,500 mg/kg.
6. The discharger proposes to construct the landfill over two feet of native material compacted to at least 95 percent ( $1 \times 10^{-8}$  cm/sec permeability). A 60-mil high-density polyethylene (HDPE) membrane will be placed over the native material and a 12-ounce geotextile fabric will be placed over the membrane. A leachate collection and removal system (LCRS) consisting of a 12-inch thick pea gravel layer with a 8-inch diameter HDPE pipe, which is sloped to drain to a collection sump, will be placed over the fabric. The oily soil will be compacted over the LCRS.
7. The discharger proposes to cover the oily soil with the following:
  - o a minimum of one foot of native material compacted to 90 percent between the oily soil and the overlying roadway section; and,
  - o 34 inches of roadway section topped with an asphaltic concrete pavement.
8. Land use within a 1 mile radius is primarily residential and light and heavy industrial use.
9. The discharger reported that the underlying soils are predominately silty clays and Bay Mud. The site lies along the northeastern edge of the bedrock ridge which forms Point Richmond. There are no known Holocene faults identified within 200 feet of the site.

10. The ground water flow is reported to be to the northeast, following the downward slope of the topography. The minimum separation between the underlying membrane liner and the ground water is 10 feet.
11. The discharger has installed three ground water monitoring wells at the site. One well is declared by the discharger to be upgradient and two are downgradient. Initial water quality monitoring results do not clearly support the discharger's declaration.
12. The discharger proposes to close the landfill as a Subchapter 15 classified Class II waste management unit by December 1989.
13. The Board finds that substantial compliance with the siting and construction standards contained in Subchapter 15 constitutes adequate minimization of waste migration for sites being closed.
14. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on August 19, 1987. This Order implements the water quality objectives for the central San Francisco Bay as stated in the Basin Plan.
15. The potential beneficial uses of the ground water in the area are:
  - a. Municipal Supply
  - b. Industrial Process and Service Supply
  - c. Agricultural Supply
16. Ground water near the site is not utilized for drinking water purposes. There are several irrigation well located near the site.
17. The existing and potential beneficial uses of the central San Francisco Bay are:
  - a. Industrial Process and Service Supply;
  - b. Navigation;
  - c. Water Contact Recreation;
  - d. Non-Contact Recreation;
  - e. Ocean Commercial and Sport Fishing;
  - f. Wildlife Habitat;
  - g. Preservation of Rare and Endangered Species;
  - h. Fish Migration and Spawning;
  - i. Shellfish Harvesting; and,
  - j. Estuarine Habitat.
18. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
19. The adoption of this Order is exempt from the provisions of Chapter 3 (commencing with Section 2100) of Division 13 of the Public Resources Code (California Environmental Quality Act). A Negative Declaration for the project has been issued by the City of Richmond.
20. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.
21. Unless otherwise noted, any references to Sections and Articles refer to portions of Subchapter 15, Chapter 3, Title 23 of the California Code of Regulations.

IT IS HEREBY ORDERED, that the discharger, and any other person(s) that operates this site, shall comply with the following:

A. Prohibitions

1. The treatment or storage of waste shall not cause pollution or nuisance as defined in Section 13050 of the California Water Code.
2. The treatment or storage of waste shall not degrade the quality of any usable ground water.
3. The discharge of wastewater onto land, into ground waters or surface waters is prohibited.
4. The installation of conduits through or under the landfill is prohibited.

B. Specifications

1. No more than twenty thousand cubic yards (compacted volume) of oily soil shall be removed from the westerly stockpile area at Marina Bay Development, Richmond, California for disposal in the proposed Class II landfill. No oily wastes, other than those characterized in the stockpile, shall be disposed in the proposed landfill. Compliance with Subchapter 15, to the extent feasible and necessary, shall be deemed adequate containment for minimization of potential migration. Engineered alternatives, approved by the Executive Officer, that provide equivalent protection of water quality may be used to fulfill the requirements contained in Subchapter 15.
2. The discharger shall conduct monitoring activities, as needed, to define the current local hydrogeologic conditions. Should monitoring results show evidence of ground water contamination from any source, the discharger shall determine the impact of the landfill on the ground water quality.

C. Provisions

The discharger shall comply with the Prohibitions and Specifications above according to the following time schedule:

1. The discharger shall submit a technical report, acceptable to the Executive Officer, documenting closure or completion of the necessary tasks related to closure. The report shall include, but not be limited to, certification of the construction methods, materials and volumes of waste soil.  
**REPORT DUE: No later than June 1, 1990.**
2. The discharger shall submit a technical report, acceptable to the Executive Officer, documenting the current local hydrogeologic conditions and effectiveness of the site's ground water monitoring system.  
**REPORT DUE: No later than December 1, 1989.**
3. The discharger shall maintain a copy of this order so as to be available at all times to sitte operating personnel.
4. Technical reports, submitted by the discharger, in compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted to the Board on the schedule specified herein. These reports shall consist of a letter report that includes the following:
  - a. A summary of work completed since submittal of the previous report and work

projected to be completed by the time of the next report;

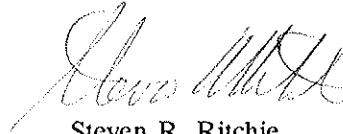
- b. Identification of any obstacles which may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles;
  - c. In the event of non-compliance with any Prohibition, Specification or Provision of this Order, written notification which clarifies the reasons for non-compliance and proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non-compliance on achieving compliance with the remaining requirements of this Order; and,
  - d. In the first self-monitoring report, an evaluation of the current ground water monitoring system and a proposal for modifications as appropriate.
7. All submittals of hydrogeological plans, specifications, reports, and documents (except quarterly progress and self-monitoring reports, shall be signed by and stamped with the seal of a registered geologist, registered engineering geologist, or registered professional engineer.
8. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.
9. The discharger shall maintain in good working order, and operate as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.
10. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, submitted by the discharger, shall also be provided to the following agencies:
  - a. Contra Costa County Health Department;
  - b. State Department of Health Services; and,
  - c. State Department of Solid Waste.
11. The discharger shall permit the Board or its authorized representative, in accordance with Section 13267 (c) of the California Water Code, the following:
  - a. Entry upon the premises in which any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order;
  - b. Access to copy and records required to be kept under the terms and conditions of this Order;
  - c. Inspection of any monitoring equipment or methodology implemented in response to this Order; and,
  - d. Sampling of any ground water or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.
12. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.

13. The discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries, contours, or ownership of the disposal area. This includes any excavations in the landfill due to roadway maintenance or repair.
14. The Board considers the property owner and site owner to have a continuing responsibility for correcting any problems within their reasonable control which arise in the future as a result of this waste discharge or water applied to this property during subsequent use of the land for other purposes.
15. These requirements do not authorize the commission of any act causing injury to the property of another or of the public, do not convey any property rights, do not remove liability under federal, state or local laws, and do not authorize the discharge of waste without the appropriate federal, state or local permits, authorizations, or determinations.
16. If any hazardous substance is discharged in or on any waters of the state, or discharged or deposited, or probably will be discharged in or on any waters of the state, the discharger shall report such discharge to the following:
  - a. This Regional Board at (415) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m.; and,
  - b. The Office of Emergency Services at (800) 852-7550.

A written report shall be filed with the Regional Board within five working days and shall contain information relative to the following:

- (1) The nature of waste or pollutant;
  - (2) The quantity involved and the duration of incident;
  - (3) The cause of spill;
  - (4) The estimated size of the affected area;
  - (5) The corrective measures that have been taken or planned, and a schedule of these measures; and,
  - (6) The persons/agencies notified.
17. The Board will review the Order periodically and may revise the requirements when necessary.
  18. If the discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the discharger shall promptly notify the Executive Officer and the Board shall consider revision of this Order.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on September 20, 1989.

A handwritten signature in cursive script, appearing to read "Steven R. Ritchie".

Steven R. Ritchie  
Executive Officer

Attachments:

Figure 1: Location Map  
Self Monitoring Program



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

RICHMOND REDEVELOPMENT AGENCY

STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION

I-580 FREEWAY EMBANKMENT, CLASS II DISPOSAL SITE

RICHMOND, CONTRA COSTA COUNTY

WASTE DISCHARGE REQUIREMENTS  
ORDER NO. 89-158

CONSISTS OF

PART A

AND

PART B



## PART A

### A. General

1. Reporting responsibilities of waste dischargers are specified in Sections 13225 (a), 13267 (b), 13383, and 13387 (b) of the California Water Code and this Regional Board's Resolution No. 73-16.
2. The principal purposes of a self-monitoring program by a waste discharger are the following:
  - a. To document compliance with waste discharge requirements and prohibitions established by the Board;
  - b. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge;
  - c. To develop or assist in the development of effluent standards of performance, pretreatment and toxicity standards, and other standards; and,
  - d. To prepare water and wastewater quality inventories.

### B. Sampling and Analytical Methods

1. Sample collection, storage, and analyses shall be performed according to the most recent version of Standard Methods for the Analysis of Wastewater, and Test Methods for Evaluating Solid Waste EPA Document SW-846, or other EPA approved methods and in accordance with an approved sampling and analysis plan.
2. Water and waste analysis (except total suspended solids) shall be performed by a laboratory approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted this Regional Board.
3. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

### C. Definition of Terms

1. A grab sample is a discrete sample collected at any time.
2. Duly authorized representative is either a named individual or any individual occupying a named position such as the following:
  - a. Authorization is made in writing by a principal executive officer; or,
  - b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general partner in a partnership, sole proprietorship, the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company.

### D. Schedule of Sampling, Analysis, and Observations

1. The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the requirements in Subchapter 15.
2. A statistical analysis shall be performed and reported annually as described in the current revision of Subchapter 15.

E. Records to be Maintained by the Discharger

1. Written reports shall be maintained by the discharger for ground water monitoring and wastewater sampling, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:
  - a. Identity of sample and sample station number;
  - b. Date and time of sampling;
  - c. Date and time that analyses are started and completed, and the name of the personnel performing the analyses;
  - d. Complete procedure used, including the method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A Section B is satisfactory.
  - e. Calculation of results;
  - f. Results of analyses, and detection limits for each analyses; and,
  - g. Chain of custody forms for each sample.

F. Reports to be Filed with the Board

1. Written self-monitoring reports shall be filed by the 15th day of the month following the report period. The report period shall be quarterly. For quarterly ground water monitoring reports, written reports shall be filed regularly each quarter within forty-five days from the end of the quarter monitored. In addition an annual report shall be filed as indicated in G.3. The reports shall include the following:
  - a. Letter of Transmittal - A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations, such as, operation and/or facilities modifications. If the discharger has previously submitted a detailed time schedule for correcting requirements violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president of his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement of the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct. The letter shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible of gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there

are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- b. Summary Sheet - Each monitoring report shall include a compliance evaluation summary sheet. Until the Order's amended to specify ground water protection standards, the following shall apply and the compliance sheet shall contain:
  - (1) The method and time of water level measurement; the type of pump used for purging, pump placement in the well, method of purging, pumping rate; equipment and methods used to monitor field pH, temperature, turbidity, and conductivity during purging; calibration of the field equipment, results of the pH, temperature, turbidity, and conductivity testing; well recovery time, and method of disposing of the purge water; and,
  - (2) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations; and, the chain of custody record.
- c. A summary of the status of any remediation work performed during that quarter. This shall be a brief and concise summary of the work initiated and completed as follows:
  - (1) As interim corrective action measures; and,
  - (2) To define the extent and rate of migrations of waste constituents in the soil and ground water at the site.
- d. The discharger shall describe, in the quarterly report, the reasons for significant increases in a pollutant concentration at a ground water monitoring well. The description shall include the following:
  - (1) The source of the increase;
  - (2) How the discharger determined or will investigate the source of the increase; and,
  - (3) What source removal measures have been completed or will be proposed.
- e. On a semi-annual basis, a map or aerial photograph showing observation and monitoring station locations, and plume contours (if any) for each chemical in each aquifer shall be included as part of the quarterly Self-Monitoring Report.
- f. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board. The following information shall be provided:
  - (1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review; and,

- (2) In addition to the results of the analyses, laboratory quality control/quality assurance (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.
- g. By January 31 of each year the discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:
  - (1) Tabular and graphical summaries of the monitoring data obtained during the previous year;
  - (2) A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements; and,
  - (3) A written summary of the ground water analyses indicating any change in the quality of the ground water.
- 2. In the event the discharger violates or threatens to violate the conditions of the waste discharge requirements and prohibitions or intends to experience a plant bypass or treatment unit bypass due to:
  - a. Maintenance work, power failures, or breakdown of waste treatment equipment, or;
  - b. Accidents caused by human error or negligence, or;
  - c. Other causes, such as acts of nature.

The discharger shall notify the Regional Board office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within 7 working days of the telephone notification. The written report shall include time and date, duration and estimated volume of waste bypassed, method used in estimating volume and person notified of the incident. The report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

In addition, the waste discharger shall promptly accelerate his monitoring program to analyze the discharge at least once every day. Such daily analyses shall continue until such time as the effluent limits have been attained, until bypassing stops or until such time as the Executive Officer determines to be appropriate. The results of such monitoring shall be included in the regular Self-Monitoring Report.

Part B

A. Description of Observation Stations and Schedule of Observations

1. The observation stations shall consist of the ground water monitoring wells, at least one upgradient well and at least three downgradient wells.
2. The schedule of observations and grab sampling shall be quarterly and shall be conducted within the months of January, April, July and October.

B. Observations and Test Procedures

1. The observations shall consist of the following:
  - a. Water elevation reported to the nearest 0.1 inch for both depth to water from the ground surface and the elevation of the ground water level;
  - b. Ground water temperature measured at the time of sampling and reported in degrees Fahrenheit;
  - c. Ground water conductivity measured at the time of sampling as per Standard Methods 205 using potentiometric methodology;
  - d. Ground water pH measured at the time of sampling as per Standard Methods 423 using potentiometric methodology; and,
  - e. Ground water turbidity measured at the time of sampling.
2. The test procedures for the ground water samples shall consist of the following:
  - a. Total Hydrocarbons as per EPA 418.1 using IR Spectroscopy and Fuel Hydrocarbons using SW 846 8015 (modified) using Gas Chromatography; and,
  - b. Total Oil and Grease.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program is as follows:

1. Developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 89-158;
2. Effective on the date shown below; and,
3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the discharger.

  
Steven R. Ritchie  
Executive Officer

September 20, 1989  
Date Ordered